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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,926	08/31/2001	George Malcolm Swift Joynes	3036/50371	8942

7590 05/05/2003
CROWELL & MORING, L.L.P.
P.O. Box 14300
Washington, DC 20044-4300

EXAMINER

JACKSON, ANDRE K

ART UNIT PAPER NUMBER

2856

DATE MAILED: 05/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,926

Applicant(s)

JOYNES, GEORGE MALCOLM
SWIFT

Examiner

Andre' K. Jackson

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-10, 13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10, 13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Drawings

1. The drawings are objected to because:

In Figure 1, each of the blocks in the drawing should be labeled with the name of the apparatus. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. Applicant noted that the corrected drawing is with the amendment, however, the Office did not receive the corrected drawing. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the Segmentor must be shown or the feature canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 7 and 13 are objected to because of the following informalities:

Regarding claims 7 and 13, "comparitor" should be --comparator--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1,7 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 7, from where are the vibrations being sensed?

Regarding claims 1,7 and 13, how are the vibrations being segmented into two spectral bands?

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama.

Regarding claim 1, Sugiyama discloses a "Method of detecting a leakage of fluid" which segments the sensed vibrations into two spectral frequencies (Figure 1a), and compares the amplitudes of the frequencies with predetermined flow rates (Column 3, abstract, Figure 4 and Claim 1). Sugiyama seems to be doing the separating by frequency and to separate them by bands would be well within the purview of the skilled artisan since when separating them into separate bands would make it easier to plot and read the information.

Regarding claim 2, Sugiyama discloses where attaching a sensor to the fluid system to obtain data indicative of fluid flow (Column 1, lines 36-41).

Regarding claim 3, Sugiyama discloses where the sensor includes a piezo-electric material (Column 1, line 19).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 5, 7, 8, 10, 13 and 15, 17*
9. Claims ~~5, 7, 10, 13~~ and ~~15-17~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama in view of Roy (GB 2335041).

Re 5/4/03

Regarding claim 5, Sugiyama does not disclose whether the sensor is a strain gauge, geophone or a hydrophone. However, Roy discloses "Detecting leaks in pipes" which has a sensor, which is a hydrophone (26). Therefore, to modify Sugiyama to include a hydrophone would have been obvious to one of ordinary skill in the art at the time of invention as taught by Roy since the use of various acoustic devices is well know in the art.

Regarding claim 7, Sugiyama discloses a comparator (19). Sugiyama does not need the aid of a segmentor since the use of two sensors is used for the detecting of leaks having those signals already separated.

Regarding claim 8, Sugiyama discloses where the sensor includes a piezo-electric material (Column 1, line 19).

Regarding claim 10, Sugiyama does not disclose where the sensor is a strain gauge, geophone or a hydrophone. However, Roy discloses a sensor, which is a hydrophone (26). Therefore, to modify Sugiyama to include a hydrophone would have been obvious to one of ordinary skill in the art at the time of invention as taught by Roy since the use of various acoustic devices is well know in the art.

Regarding claim 13, Sugiyama discloses one sensor mounted on the exterior of a pipe (Column 1) for sensing vibrations induced by fluid

flow in the pipe (Figure 3), and providing an output of indicative of the vibrations (Figure 1), a comparator (19). Sugiyama does not need the aid of a segmentor since the use of two sensors is used for the detecting of leaks and having those signals already separated.

Regarding claim 15, Sugiyama discloses where the sensor includes a piezo-electric material (Column 1, line 19).

Regarding claim 17, Sugiyama does not disclose whether the sensor is a strain gauge, geophone or a hydrophone. However, Roy discloses a sensor, which is a hydrophone (26). Therefore, to modify Sugiyama to include a hydrophone would have been obvious to one of ordinary skill in the art at the time of invention as taught by Roy since the use of various acoustic devices is well know in the art.

10. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama in view of Braathen et al.

Regarding claim 4, Sugiyama does not disclose a sensor includes a PVDF film. However, Braathen et al. discloses a "Digital speed determination in ultrasonic flow measurements" which discloses a sensor includes a PVDF film (Column 1, lines 32 and 33). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Sugiyama to include where a sensor includes a PVDF film as

taught by Braathen et al. since using the film makes for an easier application to the pipe.

Regarding claim 16, Sugiyama does not disclose a sensor includes a PVDF film. However, Braathen et al. discloses a "Digital speed determination in ultrasonic flow measurements" which discloses a sensor includes a PVDF film (Column 1, lines 32 and 33). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Sugiyama to include where a sensor includes a PVDF film as taught by Braathen et al. since using the film makes for an easier application to the pipe.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiyama in view of Roy (GB 2335041) as applied to claim 7 above, and further in view of Braathen et al.

Regarding claim 9, Sugiyama does not disclose a sensor includes a PVDF film. However, Braathen et al. discloses a "Digital speed determination in ultrasonic flow measurements" which discloses a sensor includes a PVDF film (Column 1, lines 32 and 33). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Sugiyama to include where a sensor includes a PVDF film as taught by Braathen et al. since using the film makes for an easier application to the pipe.


Response to Arguments

12. Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre' K. Jackson whose telephone number is (703) 305-1522. The examiner can normally be reached on Mon.-Thurs. 7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

A.J. 
May 3, 2003

HELEN KWOK
PRIMARY EXAMINER

